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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,267	10/22/2003	Eric A. Shank	10030564-1	4937

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AGILENT TECHNOLOGIES, INC.
Legal Department, DL 429
Intellectual Property Administration
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Loveland, CO 80537-0599

EXAMINER

KRAMSKAYA, MARINA

ART UNIT PAPER NUMBER

2858

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,267

Applicant(s)

SHANK ET AL.

Examiner

Marina Kramskaya

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-20 are objected to because of the following informalities: the term "mixing products" is not clearly defined. In the specification "mixing products" as well as "leakage/isolation terms" are displayed. Further, table 1 indicates, "name of the measurement is displayed to the user" as in column 1. These "names" include "mixing products" as well as "leakage/isolation terms". Hence, hereafter the examiner will broadly interpret the term "mixing product" as a "measurement type", wherein the "labels for a plurality of mixing products" will be interpreted as the "names of the measurements". Appropriate correction is required.

2. Claims 12-13 & 18-19 recites the limitation "the frequency converter" in lines 3 of the claims. There is insufficient antecedent basis for this limitation in these claims because independent claims 9 & 15 do not include the limitation of "the frequency converter".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 9, 11, 14, 15, 17, & 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chong, US 6,417,672.

As per Claims 9 & 15, Chong discloses an interface (**200**) for a tester comprising:
a table (see FIG. 5) that defines a plurality of mixing products (i.e. plurality of tests defined in **518** & **520**), the table including labels (in **520**) for the plurality of mixing products (i.e. type of test);

a first display interface (**214**) that displays at least a subset of the labels (displays menus: column 13, lines 56-63); and,

a processor (**310**) that, in response to a user selecting (using keypad **216**) a first mixing product (i.e. type of test) from the plurality of mixing products (i.e. plurality of test types), calculates appropriate frequencies (i.e. predetermined frequencies, FIG. 8B, and ABS. lines 2-3) for the first mixing product (i.e. test type), and determines a measurement configuration for the first mixing product (determines the "test circuit": one of **322**, **324**, or **326**).

As per Claims, 11 & 17, Chong further discloses an interface, wherein when determining a measurement configuration for the first mixing product (i.e. test type), the processor uses measurement parameters obtained from the user (user menu for "test parameters" in block 522, FIG. 5).

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As per Claims 14 & 20, Chong further discloses an interface, wherein the processor (310) sends commands (via bus 320) to tester hardware (test circuits 322, 324, 326) to make measurements.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8, 10, 12-13, 16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chong, US 6,417,672 in view of Clark et al., US 6,064,694.

As per Claim 1, Chong discloses a method for testing a device comprising:

(a) displaying (via display 214) labels for a plurality of mixing products displays menus: column 13, lines 56-63); and,

(b) in response to a user selecting (using keypad 216) a first mixing product from the plurality of mixing products (i.e. plurality of test types from menu 520), performing the following:

(b1) calculating appropriate frequencies (i.e. predetermined frequencies, FIG. 8B, and ABS. lines 2-3) for the first mixing product, and

(b2) determining a measurement configuration (determines the "test circuit": one of **322**, **324**, or **326**) for the first mixing product.

Clark does not explicitly disclose testing a frequency converter as the device under test.

Clark discloses testing a frequency converter (**14**, **16**) using a tester **10**.

Therefore, it would have been obvious to a person of ordinary skill in the art to use the tester (**200**) of Chong, to test a frequency converter of Clark, for testing the frequency response for possible faults.

As per Claim 2, Chong further discloses a method, wherein in (a) the labels are obtained from a table (see FIG. 5) defining the plurality of mixing products (i.e. plurality of tests defined in **518** & **520**).

As per Claims 3 & 4, 12 & 18, and 13 & 19 Chong discloses a method and a testing interface as in claims 1, 9, and 15 wherein (b1) includes using parameters for the device under test and measurement parameters obtained from the user (user input menus **522**).

Chong does not disclose the device under test to be a frequency converter, for which the measurement parameters are input by the user.

Clark discloses testing a frequency converter (**14**, **16**) using a tester **10**.

Therefore, it would have been obvious to a person of ordinary skill in the art to use the tester (200) of Chong, to test a frequency converter of Clark, for testing the frequency response for possible faults.

As per Claim 5, Chong further discloses a method, wherein (b) additionally includes performing the following:

(b3) sending commands (via processor 310) to hardware (test circuits 322, 324, 326) to make measurements.

As per Claim 6, Chong discloses a method as applied to claim 5, above.

Chong does not disclose the hardware in (b3) including tester hardware and an external local oscillator.

Clark discloses the hardware in (b3) including tester hardware (10, 12) and an external local oscillator (24).

Therefore, it would have been obvious to a person of ordinary skill in the art to include an external local oscillator, as taught by Clark, in the tester hardware of Chong, in order to produce necessary test signals.

As per Claims 7, 10, and 16, Chong discloses a method and a tester interface as in claim 1, 9, and 15.

Chong does not disclose the plurality of mixing products that include at least one of the following measurements:

Match Input;

Match Output;

Match local oscillator (LO);

Isolation In → out;

Isolation LO → Out;

Isolation Out → In;

Isolation LO → In;

Isolation Out → LO;

Isolation In → LO;

Conversion Gain vs. Input Power;

Input Match versus Input Power;

Spur Table;

Image Rejection;

Swept Spur;

Conversion Gain;

Gain compression.

Clark discloses the plurality of mixing products that include at least one of the following measurements:

Match Input (column 1, lines 47-48);

Match Output (column 1, lines 47-48);

Match local oscillator (LO);

Isolation In → out;

Isolation LO → Out;
Isolation Out → In;
Isolation LO → In;
Isolation Out → LO;
Isolation In → LO;
Conversion Gain vs. Input Power;
Input Match versus Input Power;
Spur Table;
Image Rejection;
Swept Spur;
Conversion Gain;
Gain compression.

As per Claim 8, Chong further discloses a method, wherein (b2) includes using measurement parameters (measurement parameters from use input menu **522**) obtained from the user (user input using key pad **216**).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Clark et al., US 5,937,006, and 6,041,077, discloses a method and interface for testing a frequency converter device. Takano et al., US 5,579,463, discloses a display interface for frequency type measurements. Chang et al., US

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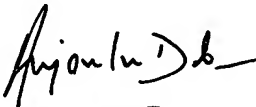
5,619,489, discloses a hand held user interface for testing a high frequency device.

Kranitzky, US 6,825,647, discloses a device and method for testing a frequency converter. Bradley et al., US 5,642,039, discloses a testing method and interface with a local oscillator and frequency calculation, measurement configuration, and user input parameters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Kramskaya whose telephone number is (571)272-2146. The examiner can normally be reached on M-F 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571)272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ANJAN DEB
PRIMARY EXAMINER

Marina Kramskaya
Examiner
Art Unit 2858

